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Change Management Guide (Version 1.1)

1) Purpose

The purpose of this document is to provide guidance to bridge the gap between the change management process and procedures description documentation, *Change Management Process and Procedures*, and the detailed Remedy technical change management users' guides, *OTOP Change Management Quick Guide – Submitters* (and *Approvers*).

2) Background

As a result of the development of a more ITIL compliant environment in OTOP, with associated common processes across the operating divisions, the change management approval and implementation processes in NCC and EDSD have been realigned into a single, integrated process. Additionally, a single Change Advisory Board (CAB) has been established with members from both NCC and EDSD, chaired by the OTOP Deputy Director. This realignment necessitated the development of new processes and procedures prescribing how information technology system changes are submitted and approved.

3) Customer Impact

Customer impact must be considered for all submitted changes. As described in paragraph 4.a.1 below, notification timeframes have been establish by the OTOP Director whenever an outage or customer impact could result from a change implementation. In order to minimize customer impact, change submitters should make every effort to meet these timeframes and also attempt to keep most changes categorized as normal changes.

4) Submitting a Request For Change (RFC)

a. Change Types

Four change types are in use in the OTOP environment: Normal, Standard, Expedited, and Emergency (defined as Latent in the Remedy system). The *Change Management Process and Procedures* document provides descriptions, process flow charts for these change types and considerable detail. Changes are submitted via the Remedy system and are accompanied by a supporting Request for Change (RFC) document.

- **Normal Changes**: Normal changes are the most common type of change. These are changes which do not require any special considerations and can be applied within the timeframe established by the *Change Management Process and Procedures* document. Changes that will require an OEI Notification, Agency Mass Mailer or CTS Notification due to a system outage or significant system changes affecting customers require a ten business day lead time for notification to the customers. Keep this time requirement in mind when determining how soon in advance to submit the change. Normal changes will be prioritized automatically by Remedy as defined in paragraph 4.b below. **The workflow for a Normal Change is shown in Appendix A.**

  Normal Changes Key Highlights:

  - Request submitted via Remedy

  - Approval process (Functional Approvers) – 3 business days

  - High & medium priority (significance) requests approved electronically by functional staff, then routed for CAB approval.

  - Low priority (significance) requests are approved electronically by Functional Approvers only.

  - CAB has the final approval on high and medium changes.

  - Formal meeting is held – changes are not approved electronically via Remedy until after CAB meeting.

- **Expedited Changes** - Electronic Approvals by the OTOP CAB: Expedited changes are categorized as non-emergency changes (see paragraph 4.a.4 for Emergency Change description) that must be implemented in a time frame that does not allow them to

go through the normal approval cycle/timeframe (e.g., customer request, change directed by EPA management, vendors availability). For instance, a change may require that an external vendor also be available when the change is implemented. The external vendor may only be available on the 3rd business day after the change is submitted, which could be before the next scheduled Change Advisory Board meeting.

After the Functional Approvers approve the expedited change request, a Remedy notification will be sent to the five primary OTOP CAB members along with their four designated backups. The Change Coordinator or Change Manager will send a follow-up reminder notification to the OTOP CAB and the four designated backups.

The OTOP CAB (primary Branch Chief) member who owns the change request should respond via email within one business day to Rebecca Forbes (Change Coordinator) and Tom Lagrassa (Change Manager) with the answer of approve, reject, or need more information. The OTOP CAB member should also cc the other CAB members and the Communication Specialist if a user notification is needed.

NOTE: If the OTOP CAB member who owns the change request is not available, then their designated backup should respond. If neither the primary OTOP CAB member nor his/her backup is available then the other primary and/or designated backup CAB member within the same division should respond.   If none of the primary CAB members or their designated backups are available in the same division then one of the other CAB members from the other division should respond. The Chair will address conflicts and respond when none of the divisional OTOP CAB members are available.

The Change Coordinator or Manager will update the Remedy system on behalf of the CAB member and perform any necessary follow-up if needed.

NOTE: Depending on when the expedited request was submitted, it may be discussed at the OTOP CAB meeting instead of being approved electronically by one CAB member. If discussed at the meeting, then the entire OTOP CAB would vote on the request the same way the CAB votes on normal change request.

Approved expedited change requests are presented to the full CAB in a Post Change Implementation Review at the next scheduled CAB meeting. The Expeditious

Change routing should be used as sparingly as possible. **The workflow for an Expedited Change is shown in Appendix B.**

Expedited Changes Key Highlights:

- Follow normal process flow with faster review time (1 business day) for Functional Approvers.

- Electronically approved by CAB (only one CAB approver needed) for high and medium priority. No formal CAB meeting required. (1 business day)

- Communication Specialist is notified if a user notification is required because of an outage and/or if system operations will be affected.

- Low priority requests are approved electronically by Functional Approvers only.

- **Standard Changes**: A Standard Change is a normal change that will be implemented on a routine, recurring basis (e.g. certain Domino systems monthly patches). These changes are submitted as Normal Changes the first time they are considered, but are designated to become a Standard Change. The Change Submitter should indicate in the Summary field that they are requesting that this normal request become a standard and the priority must be medium or high in order for the change request to be routed to the CAB. If approved by the CAB as a new standard change, a standard template is created in Remedy with a change number. When it's time to implement the standard, the Change Submitter should resubmit the request in Remedy using the appropriate standard template. This change will not go through the CAB review and approval process again, however, it will be placed on the Forward Schedule of Changes. **The workflow for a Standard Change is shown in Appendix C.**

Standard Changes Key Highlights:

- Standard –preapproved, low risk, routine change

- Follows normal process flow for initial request only.

- After CAB approval, the standard request is resubmitted when it's time to implement the change. However, it is does not have to be approved again by the Functional Approvers or CAB.

- Communication Specialist is notified if a user notification is required because of an outage and/or if system operations will be affected.

- The submitter will select the standard template in Remedy and the change request will be placed on the forward schedule of change report.

- **Emergency Changes**: An Emergency Change is a change to correct a "Break/Fix" condition (e.g. a major security issue has been found in an operating system and a patch must be applied immediately). The EPA Functional Approver must get a verbal or written approval from an OTOP CAB member to proceed with the emergency request. Once the required approval is received, the Functional Approver can give authorization to a Technical Point of Contact to proceed with the change. The emergency request would then be entered into Remedy within one business day following the change implementation. A notification will go out via Remedy to the primary Functional Approvers, OTOP CAB, EDSD and NCC Communication Specialists, Change Coordinator, and Change Manager. Emergency changes will be reviewed by the CAB at the next scheduled CAB meeting through the Post Change Implementation Review process. **The workflow for an Emergency Change is shown in Appendix D.**

  Emergency (break/fix) Changes Key Highlights:

  - Only one CAB member required to approve (< 1 business day) – approvals received from Functional Approver verbally or via email.

  - Communication Specialist notified if a user notification is required because of an outage and/or system operations are affected.

  - Request entered in Remedy within 1 business day after change is implemented.

  - Broadcast notification that an emergency change has been implemented will be sent to the CAB, Communication Specialist, primary Functional Approvers, Change Coordinator and Change Manager.

b. Remedy

Anyone charged with submitting or approving a change request will require access to the Remedy system (Note: CAB approval is facilitated by the Change Coordinator/Manager support positions). Change submitters login to Remedy and are prompted to enter the change. Detailed procedures for entering and approving the change in Remedy are contained in the Remedy user's guides, *OTOP Change Management Quick Guide – Submitters* (and *Approvers*). Users submitting a change must have an awareness of the user community and systems being impacted, as the Remedy system will require them to evaluate user impact and overall risk. Remedy users will answer the following five risk related questions in an on-line form in the system (by clicking the scale icon) to assist them in determining the risk rating on the Determination of Urgency/Priority matrix:

1) Is the change implementation plan documented to the level so that more than one individual could execute it?
2) Is the roll-back plan documented to the level so that more than one individual could execute a roll-back?
3) Is there a written verification test plan that will be executed immediately at the conclusion of the change to verify success?
4) Has the change been tested in a non-production environment?
5) Will this change be implemented outside of core business hours?

Users will also assess the impact (affect on the population of users) of implementing a proposed change. The Determination of Urgency/Priority matrix has risk level on one axis and impact (Low, Medium and High) on the other. Impact is defined as below.

Impact Level	Remedy Value	Quantity Affected
Low	4-Minor/Localized	<150 Users
Medium	3-Moderate/Limited	150-1,500 Users
High	2-Significant/Large	>1,500 Users

Based on the impact and the answers to the risk questionnaire, the Change Submitter will be able to determine the urgency (high, medium or low). Setting urgency will automatically also set the priority field. The priority is the rating of significance of the change request necessary to determine whether CAB involvement in the approval process is appropriate. High and medium priority changes will be routed to the Change Advisory Board for review and approval. Low priority changes bypass the CAB, but are

subject to review at the next regularly scheduled CAB meeting. The previously described matrix is illustrated below.

Determination of Urgency/Priority V. 2

Impact

	<150 users 4-Minor/Localized	150-1,500 users 3-Moderate/Limited	>1,500 users 2-Significant/Large
Risk Level 4 or 5	Impact 4-Minor/Localized Risk Level 4 or 5 **URGENCY SET TO MEDIUM**	Impact 3-Moderate/Limited Risk Level 4 or 5 **URGENCY SET TO HIGH**	Impact 2-Significant/Large Risk Level 4 or 5 **URGENCY SET TO HIGH**
Risk Level 2 or 3	Impact 4-Minor/Localized Risk Level 2 or 3 **URGENCY SET TO LOW**	Impact 3-Moderate/Limited Risk Level 2 or 3 **URGENCY SET TO MEDIUM**	Impact 2-Significant/Large Risk Level 2 or 3 **URGENCY SET TO HIGH**
Risk Level 1	Impact 4-Minor/Localized Risk Level 1 **URGENCY SET TO LOW**	Impact 3-Moderate/Limited Risk Level 1 **URGENCY SET TO LOW**	Impact 2-Significant/Large Risk Level 1 **URGENCY SET TO MEDIUM**

(Left axis label: **Risk Level**)

a. RFC Document

Each normal, emergency, expedited and standard change submitted into Remedy must be accompanied by an attached Request for Change (RFC) document, RFC Form 2.1. The RFC contains detailed information about the proposed change, such as description of the change, affected systems, name of the implementer, proposed change date, implementation plan, back out plan, and other relevant information. Certain information in the RFC duplicates information that is contained in the Remedy change record (e.g., Risk Level). This duplicate information should be consistent and the RFC document must be attached **before** the change record is submitted into the review process. Procedures for filling out the RFC and how to attach it in Remedy are described

in the RFC document itself. It contains detailed instructions for completion along with embedded help tips.

6) The Change Management Process after Submission

a. Functional and Technical Review

1) After submission in Remedy, normal changes will be given three days to be reviewed by an established list of Functional Approvers in both NCC and EDSD. Functional reviewers may choose to consult with their technical staff during this period, but must approve or disapprove the change within the three day review period. The RFC form is submitted with changes requests and attached to the Remedy change record. The RFC form can be separately distributed to appropriate parties to support technical review for those that do not have the necessary Remedy privileges to view the change record directly. This can be accomplished by:
   a. The Functional Approver downloading the RFC from Remedy and forwarding it to the technical support staff,
   b. Or, the technical support staff requesting the Change Manager or Coordinator to forward the RFC to them.
2) Expedited changes are given a one day review period. Again, Functional Approvers may coordinate with their technical support team.
3) Standard changes are preapproved and are not subject to functional review other than during their initial submission.
4) Emergency changes do not go through the functional review process.

Functional Approvers are expected to participate, either in person or by teleconference, in the CAB meetings in order to answer any questions or to provide advice and assistance as requested.

If one or more Functional Approvers disapprove a change request, the change request will be returned to the requestor for more information and re-submittal. Once a change is rejected, it cannot be resubmitted by the Change Submitter/Initiator. A new change request must be completed and the change request should include the original change request number, why the request was rejected, and how the issue was rectified. Care should be taken by Functional Approvers not to reject inadequately-documented requests, initially. The first response to insufficient information should be to request more information via the Remedy system.

b. Change Advisory Board Review

The CAB will normally meet once a week. All high and medium priority (significance) normal changes are routed to the change advisory board for approval. In addition to reviewing and approving normal changes, the CAB performs the following functions:

1) Provide enterprise risk management, communications management, and process compliance management to the change process environment.
2) Ensure that changes to the EPA infrastructure or contracted EPA systems are reviewed and processed in accordance with established Change Management processes and procedures.
3) Ensure all changes adhere to EPA policy, are documented, tested, and approved.
4) Provide oversight to ensure that EPA Change Management process documents are maintained as a Configuration Item (CI) component and placed under configuration management control.
5) Reporting on the effectiveness of Change Management activities to executive leadership.
6) Overrule any approvals or disapprovals of the Functional Approvers on individual change requests.

Expedited change requests normally bypass the CAB meeting process due to the quick turnaround, but are still presented to one of the CAB members for an electronic approval. The full CAB will review expedited changes (along with standard and emergency changes) at the next regularly scheduled CAB meeting.

The Deputy Director OTOP is the designated CAB Chairperson. There are also two CAB members each from NCC and EDSD.

c. Change Manager/Coordinator Role

Submitted changes will be monitored by the Change Manager and/or Change Coordinator. These contractor support personnel will periodically review the progress of submitted changes, ensure Functional Approvers are reviewing and acting on change requests, and will collate and submit changes to the CAB. The Change Coordinator will also facilitate the CAB meeting, presenting reports such as the Next 14 Day Change Schedule, the Past Seven Days Change Schedule, and the Forward Schedule of Change. They will periodically interact with functional and/or technical approvers to shepherd changes through the change process and will also assist and advise functional/technical personnel and CAB members on process and procedures matters. Additional Change

Manager and Change Coordinator responsibilities are outlined in the *Change Management Process and Procedures* document.

d. Change Implementation

Once a normal change has been approved by the CAB, it can be implemented in accordance with the schedule that was approved by the CAB. If any change fails, presents issues, or cannot be implemented for any reason, a Change Post Implementation Review (CPIR) form will be prepared and the Change Manager and/or Coordinator will present the change for review at the next scheduled CAB meeting.

7) Comments and Feedback

a. Comments and/or feedback on this document or the Change Management process are solicited and should be submitted to the following (current as of August 1, 2011; these are contract positions supporting OTOP Change Management operations and continuous process improvement):
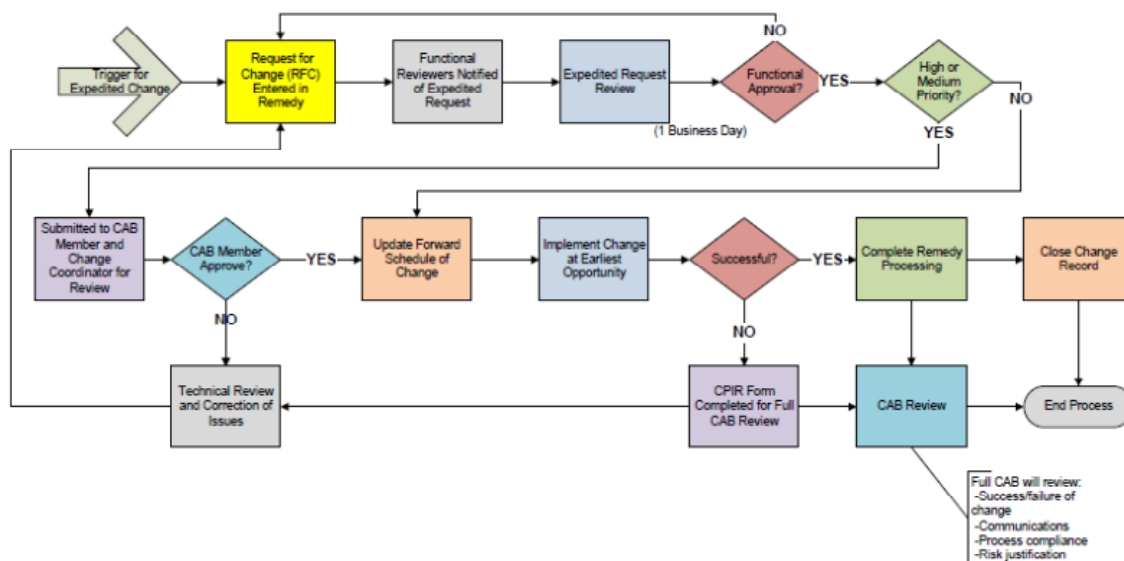
1) Meyer.DavidW@epa.gov
2) Funderburg.Gus@epa.gov
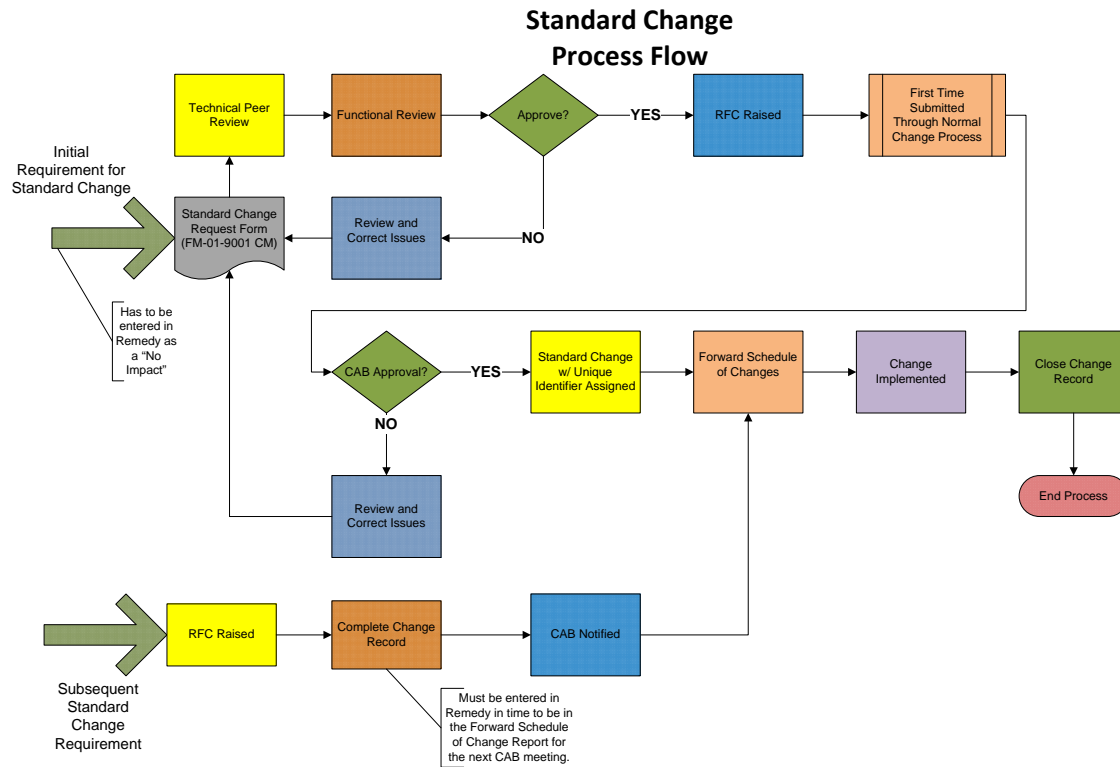3) Forbes.Rebecca@epa.gov
4) LaGrassa.Tom@epa.gov

Appendix A

NORMAL CHANGE PROCESS FLOW
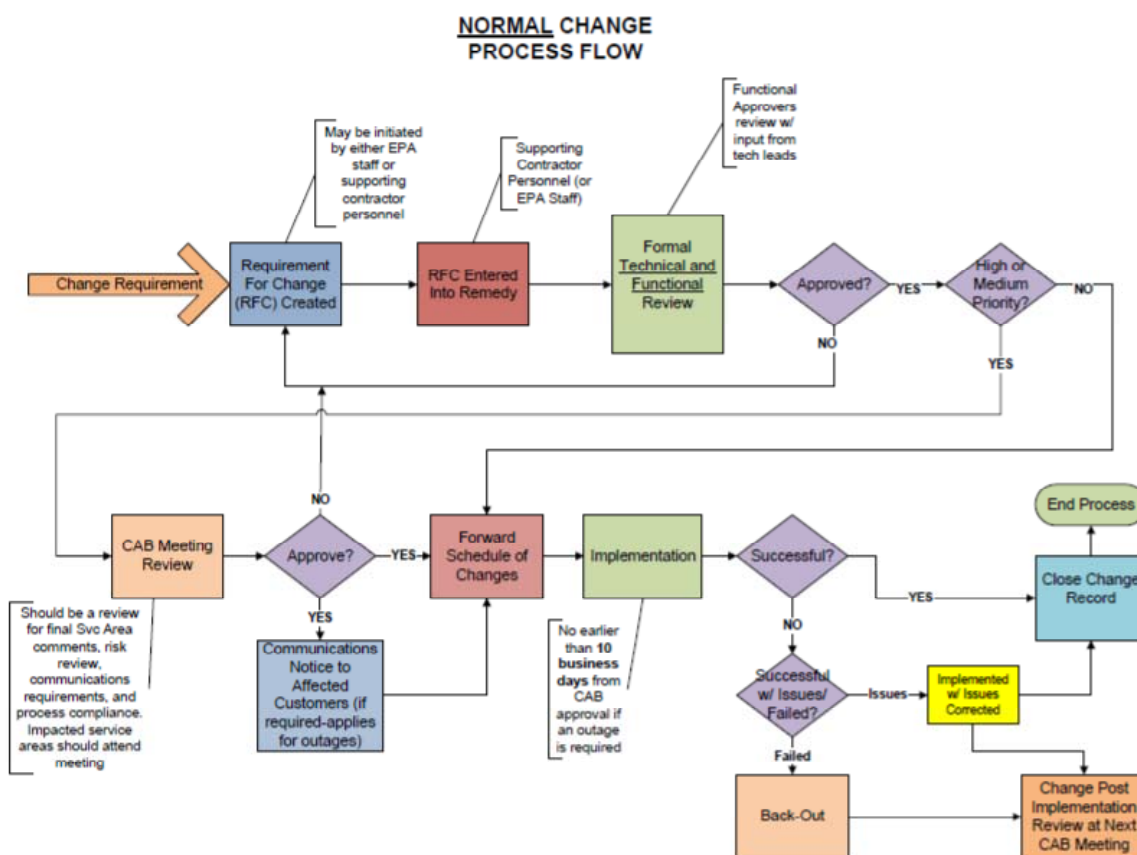
Appendix B

Expedited Change Process Flow

Appendix C

**Standard Change
Process Flow**

Appendix D

Emergency Change
Process Flow

Priority 1 issues; break/fix

One approval required; E-CAB; Branch Chief level

Trigger for Emergency Change Processing

Change Request Submitted by Variable Means to List of "Operational Approvers"

Operational Approval/ Rejection?

Reject

Return to Change Originator

Approve

Full CAB will review:
-Success/failure of change
-Communications
-Process compliance
-Risk justification

Technical Staff Implement Change

Any Incomplete Portions of Change Package Completed in Remedy

Within 1 day

Change Successful/ Failed?

Success

Retroactive review by full CAB at weekly meeting

Close Change Request in Remedy

Failure

CPIR Form Completed for Full CAB Review